AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

- 1.-43. (Canceled).
- 44. (New) An amperometric sensor suitable for determining the concentration of hydrogen peroxide in a sample, said sensor comprising a ferricyanide compound which, in reduced form, functions as a mediator selective for hydrogen peroxide, wherein the ferricyanide compound is of general formula:

$$X_3$$
 Fe (CN)₆

wherein each X is a phosphonium ion of formula (R^5) (R^6) (R^7) (R^8) P^+ in which R^5 to R^8 are the same or different alkyl groups containing from 1 to 20 carbon atoms, provided that at least one group R^5 to R^8 contains at least 4 carbon atoms.

- 45. (New) A sensor according to claim 44, further comprising an enzyme which is capable of reacting with an analyte in the sample to produce hydrogen peroxide.
- 46. (New) A sensor according to claim 45, wherein the analyte is glucose and the enzyme is glucose oxidase.
- 47. (New) A sensor according to claim 44, in which the ferricyanide compound is covalently bound to a polymer.
 - 48. (New) A sensor according to claim 47, wherein the polymer is a polyacrylamide.
- 49. (New) A sensor according to claim 47, wherein the ferricyanide compound is bound to the polymer via one of groups R⁵ to R⁸ of a quaternary phosphonium ion of formula

$$(R^5)(R^6)(R^7)(R^8)P^+$$
.

- 50. (New) A sensor according to claim 44, wherein the ferricyanide has a solubility of from 2000 mg/L to 20,000 mg/L in pure water.
- 51. (New) An amperometric sensor suitable for determining the concentration of hydrogen peroxide in a sample, said sensor comprising a ferricyanide compound covalently bound to a polymer, which ferricyanide, in reduced form, functions as a mediator selective for hydrogen peroxide.
 - 52. (New) A sensor according to claim 51, wherein the polymer is a polyacrylamide.
- 53. (New) A sensor according to claim 51, further comprising an enzyme which is capable of reacting with an analyte in the sample to produce hydrogen peroxide.
- 54. (New) A sensor according to claim 53, wherein the analyte is glucose and the enzyme is glucose oxidase.
- 55. (New) A sensor according to claim 51, wherein the ferricyanide compound is of general formula:

X_3 Fe (CN)₆

in which the groups X are the same or different and at least one X is a non-metallic ion.

- 56. (New) A sensor according to claim 55, in which each X is a quaternary ammonium ion of formula (R^1) (R^2) (R^3) (R^4) N^+ in which R^1 to R^4 are the same or different alkyl groups containing from 1 to 20 carbon atoms, provided that at least one of R^1 to R^4 contains at least 4 carbon atoms.
- 57. (New) A sensor according to claim 56, wherein the ferricyanide compound is tetrahexylammonium ferricyanide, tetrakisdecylammonium ferricyanide, tetradecyltrimethylammonium ferricyanide or trimethylhexylammonium ferricyanide.

- 58. (New) A sensor according to claim 55, wherein each X is a phosphonium ion of formula (R^5) (R^6) (R^7) (R^8) P^+ in which R^5 to R^8 are the same or different alkyl groups containing from 1 to 20 carbon atoms, provided that at least one group R^5 to R^8 contains at least 4 carbon atoms.
- 59. (New) A sensor according to claim 55, wherein each X is a nitrogen-containing heterocyclic cation.
 - 60. (New) A sensor according to claim 59, wherein each X is a pyridinium ion.
- 61. (New) A sensor according to claim 51, wherein the ferricyanide compound is bound to the polymer via one of groups R^1 to R^4 of a quaternary ammonium ion of formula

$$(R^1)(R^2)(R^3)(R^4)N^+$$

or via one of groups R⁵ to R⁸ of a quaternary phosphonium ion of formula

$$(R^5)(R^6)(R^7)(R^8)P^+$$

or via a nitrogen-containing heterocyclic cation.

- 62. (New) A sensor according to claim 50, wherein the ferricyanide compound is polypyridinium ammonium ferricyanide or poly(acrylamide-co-diethyldimethyl ammonium) ferricyanide.
- 63. (New) A sensor according to claim 51, wherein the ferricyanide has a solubility of from 2000 mg/L to 20,000 mg/L in pure water.
- 64. (New) A cartridge for an amperometric sensor suitable for measuring hydrogen peroxide in a sample, which cartridge comprises a ferricyanide compound as defined in claim 44.
 - 65. (New) A cartridge according to claim 64, further comprising an enzyme.
 - 66. (New) A cartridge according to claim 64, further comprising an enzyme.

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- 67. (New) A cartridge for an amperometric sensor suitable for measuring hydrogen peroxide in a sample, which cartridge comprises a ferricyanide compound as defined in claim 51.
 - 68. (New) A cartridge according to claim 67, further comprising an enzyme.
 - 69. (New) A cartridge according to claim 67, further comprising an enzyme.